

352 of old pouches stuffed with guanaco wool, and sewn up with ostrich or guanaco sinews, a few lechos or woven blankets obtained from the Araucanos, and the remaining saddle gear. The
 415 cooking utensils comprise only an occasional iron pot, and an asador or spit; wooden platters are occasionally met with. The
 411 weapons used in the chase are the bolas, fitted with either two or three balls, the first being used against ostrich, and the latter to capture guanaco; and a lazo for capturing wild horses or cattle.

The arms of the Tehuelches consist of gun, or revolver, a long heavy lance, used only by dismounted Indians, and the bola perdeda, or single ball, a most effective weapon in their hands. Pigafetta mentions these Indians as using bows and arrows; this I look upon as an error: he either met with a party of Fuegians, or else with a tribe of Pampas living on the sea-coast, further north, whom I shall shortly have occasion to notice. My reason for stating that he was wrong is simply that no flint arrowheads are met with until the Rio Negro is reached, where they abound. Also there is but little wood nearer than the Cordillera suitable for bows, and it is reasonable to suppose that previous to the introduction of horses, these Indians' journeys were confined to a smaller area. Indeed, one Indian informed me that some caves, existing in a volcanic range south of the Santa Cruz river, were formerly inhabited by Tehuelches. When not engaged in hunting or training their horses, men occupy themselves in making
 462 wooden saddles, bolas, lazos, spurs, and other gear, or in working
 322 silver ornaments and pipes made out of stone or hard wood, and
 324 fitted usually with a silver tube; they also manufacture iron, procured by trade or from shipwrecks, into rings, knives, etc.

Their anvils and hammers for working the silver are generally of stone. They also shape the materials for bolas with hard stones; the scrapers with which the women clean the skins are of flint or obsidian, of which material, probably, prior to the advent of the Spaniards, their knives were constructed. They
 372 procure fire by the use of flint and steel, employing as tinder a description of dried fungus, obtained in the wooded districts at the base of the Cordillera. The women's occupations, besides
 462 discharging all the household duties and fetching wood and
 281 water, consist in dressing the skins and manufacturing the mantles of the young guanaco, fox, skunk, and ostrich skins, using, instead of needles and thread, sharp metal bodkins and sinews obtained from the back of the adult guanaco. The puma, fox, and ostrich mantles, are chiefly manufactured for barter in the settlements. Some of the women also weave garters and fillets for the head, and occasionally work in silver. The children amuse themselves, as usual, by imitating their elders. The boys practise with miniature bolas and lazos, and mount any

Discussion.

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The obsidian and flint articles

were confined to scrapers used by the women for cleansing skins, and flints for obtaining fire. There were no traditions regarding the migrations of tribes extant amongst the Indians. It was impossible to obtain information of their forefathers from the Indians. The disposition of the Tehuelches was, when not excited by drink or warfare, cheerful and good-humoured. They treated Lieut. Musters with great kindness. They were particularly fond of their children. During the author's visit and travels in the country, all the tribes were mustered for political purposes: being on the staff of the head chief, he took notes of the numbers of each tribe: from these data he made his calculations, allowing four women and children to each able-bodied man. The numbers are probably slightly under than over the mark.

The following gentlemen also took part in the discussion on the above: viz, Mr. J. J. Monteiro, Col. Lane Fox, Mr. Charlesworth, Mr. Wade, Dr. Richard King, Mr. Wake, Mr. H. Howorth, Mr. Lewis, and the Chairman.

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the introduction of the horse, between 1670 and 1741, the Tehuelche 41/ abandoned their ancestral weapon in favor of the bolas. As pointed out by Outes,¹⁰ there is no literary mention of bolas in Patagonia before the expedition of John Byron in 1764, but all travelers thereafter speak of it. On the other hand, various discoverers during the first half of the sixteenth century observed bolas in use among the inhabitants of the La Plata littoral, such as the Minuané, Charrúa, and Querandi, but archeological evidence indicates that this missile was never employed so extensively in that region as it was later in Patagonia. In Chile, Bolivia, and Peru occasional finds have been made of grooved stones suggesting bolas, but their use never was typical, for the inhabitants of these lands preferred the sling. The greatest development of the bolas, then, was among the Tehuelche, but the center of dispersion apparently was the La Plata district.

Among the Tehuelche three types of bolas were employed (fig. 2, g-i). The simplest of these, known as the *bola perdida*, was a stone ball attached to a cord about a yard long. This was employed in warfare, for finishing off wounded game, and for killing puma, which they always attacked at close quarters (fig. 3). A second type, called *chumé*, had two balls joined by a cord six or seven feet long. This was intended primarily for capturing ostriches. A third type, with three balls, known as *yachiko*, was dedicated to the pursuit of guanaco.

In compound bolas one ball is especially designed to be grasped in the hand when the missile is spun and cast. We do not know the Tehuelche name for it, but it is called the *mancjo* in Spanish. This stone is not round, but oval (fig. 2, d-f), and is lighter by about a third than the other balls.

In former times bolas' balls were made of stone or hematite, but the Tehuelche have employed lead or copper when procurable. 41/ 324● Archeological examples from southern Patagonia, illustrated in fig. 2, a-c, show various types of grooving. More recently, however, the stones have been enclosed in leather sacks and therefore have no grooves. The average weight of a ball is perhaps a pound, but there is a good deal of variation in this respect.

The cord used in Tehuelche bolas is of ostrich or guanaco sinew, 41/ 283 braided four-ply.

As a weapon the bolas has both its advantages and disadvantages. 41/

¹⁰ 1905, p. 427.

000 in trees," or "books in the running brooks;" the land possesses neither in numbers sufficient to be conversable. "Sermons in stones," even, must have been of very pebbly dimensions, and of no great weight. Had this difficulty been removed, I confess I had no great desire to surmount it. I was the object of suspicion and hostility. My life was in constant danger. To diminish, as far as possible, the causes of dislike, to mitigate their ferocious hate, to elude occasions of mischief, to delay what I feared could not be very long prevented, was my continual study. If the reader is not satisfied with this account of my conduct, I am sorry for it, but cannot afford any words of contrition. It is vastly easier, I may hint to the objector, to prescribe another's duties than to judge of one's own, especially where the two parties are in circumstances so widely differing. The Patagonians need the gospel—and the law—as much as any people I could name from personal observation. There was no trace of instruction imparted at a previous period, and the reception Christianity would meet with among them is yet to be discovered.

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325 Their pipes are made of a hard red stone, the bowl dug out with whatever iron or steel implement is at command to the dimensions of an ordinary clay pipe, the stem about an inch square, and three inches long, with a small perforation. A copper or brass tube, about two inches long, is fitted to the stem, and serves as a mouth-piece. This is made by bending or hammering a metallic plate about a small round stick, and soldering or cementing it with a glutinous substance thickened with earth.

325 The copper, brass and iron, seen among them, was probably procured from unfortunate vessels wrecked on their